

WHAT IS CLAIMED IS:

1. A delivery device for delivering a plurality of individual surgical fasteners,
5 said delivery device comprising:

10 a. a drive mechanism having distal and proximal ends, said drive mechanism comprising a moving member and a fixed opposing member, said moving member being moveable proximally and distally with respect to said delivery device, said moving member having a sharpened distal end for piercing tissue;

15 b. at least one surgical fastener located between said first and said second members, each of said at least one surgical fasteners having a proximal end and a distal end;

20 c. an actuator having at least two sequential positions, first position for moving said moving member distally and piercing tissue, and a second position for moving said moving member proximally, thereby deploying said distal end of said fastener.

25 2. The delivery device of claim 1 wherein the moving and fixed members have inner surfaces having a plurality projections spaced thereon, said projections engaging said fasteners.

30 3. The delivery device of claim 1 wherein said fasteners comprise a body having a distal end, a proximal end, and a longitudinal axis therebetween, said fasteners include at least one barb extending axially away from said distal end, and one barb extending axially away from said second end.

4. The delivery device of claim 3 wherein said barbs engage inner surfaces of said moving and fixed members.

5. The delivery device of claim 1 wherein the fastener is formed from stainless steel.

6. The delivery device of claim 1 wherein said fasteners are made from a superelastic alloy.

7. The delivery device of claim 6 wherein superelastic alloy is a nickel titanium alloy.

10 8. The delivery device of claim 1 having a plurality of fasteners located between said moving and fixed members, and wherein said fasteners are not engaging one another and are spaced apart from one another.

15 9. A delivery device for delivering a plurality of individual surgical fasteners, said delivery device comprising:

20 a. a drive mechanism having distal and proximal ends, said drive mechanism comprising a moving member and a fixed opposing member, said moving member being moveable proximally and distally with respect to said delivery device;

25 b. at least one surgical fastener located between said first and said second members, each of said at least one surgical fasteners having a proximal end and a distal end;

30 c. an actuator having at least two sequential positions, first position for moving said moving member distally and piercing tissue, and a second position for moving said moving member proximally, thereby deploying said distal end of said fastener.

d. mechanism which prevents said actuator from moving to said second position, after initially moving to said first position, until said actuator has fully moved to its first position, and from moving to said

first position, after initially moving to said second position, until said actuator has fully moved to its second position.

10. The delivery device of claim 9 wherein the first and second members have
5 inner surfaces having a plurality projections spaced thereon, said projections
engaging said fasteners.

11. The delivery device of claim 9 wherein said fasteners comprise a body
having a distal end, a proximal end, and a longitudinal axis therebetween,
10 said fasteners include at least one barb extending axially away from said
distal end, and one barb extending axially away from said second end.

12. The delivery device of claim 11 wherein said barbs engage inner surfaces of
said first and second members.

15 13. The delivery device of claim 9 wherein the fastener is formed from stainless
steel.

14. The delivery device of claim 9 wherein said fasteners are made from a
20 superelastic alloy.

15. The delivery device of claim 14 wherein superelastic alloy is a nickel
titanium alloy.

25 16. The delivery device of claim 9 having a plurality of fasteners located
between said first and second members, and wherein said fasteners are not
engaging one another and are spaced apart from one another.

30 17. The delivery device of claim 9 wherein said moving member has a sharp
distal end for piercing tissue.